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ABSTRACT

The in-service training program described in this report was implemented by the Community College of Allegheny County (CCAC), Pennsylvania, in order to help vocational educators and administrators to develop skills in computer applications, software evaluation, and computer-based training. After providing background on the project, the report presents descriptive information on: (1) the program's audience (i.e., 76 vocational educators and administrators representing a wide range of disciplines and computer sophistication); (2) attendance (i.e., the majority of the attendees participated in at least 16 of a total of 21 hours of instruction provided); (3) cost effectiveness (i.e., the total cost per person was $250, making the training more cost effective than outside training); (4) the need and rationale for the program, the problem addressed, goals and objectives, limitations, and solutions to limitations; and (5) program development and implementation, which involved needs assessment; assessment of knowledge level, generalizable topics, available resources, and needed computer skills; and development of evaluation instruments. The next sections look at evaluation procedures and results, including short descriptions of each in-service session along with participants' ratings of relevancy and quality. Finally, conclusions and recommendations are provided. The appendices, which make up over half of the document, include promotional materials, the evaluation instruments and responses, the report of an external evaluator, a list of media used in the training, and the project proposal. (EJV)

ED273311

*FINAL REPORT*

# *THE COMPUTER AS A TEACHING TOOL*

*"In-Service Training Program in Advanced Technology For Vocational Educators"*

*(Contract No. 94-4014)*

*by* ***Joanne Velan Dunn,*** *Ph.D.*
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***January, 1985***

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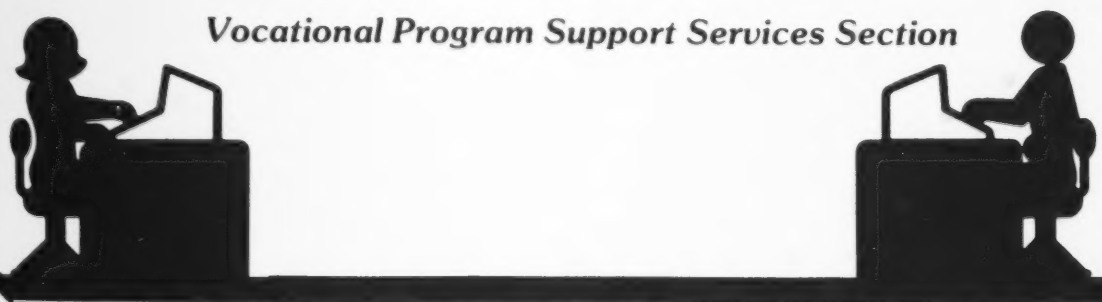

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ABSTRACT

In conjunction with a grant from the Pennsylvania Department of Education, Bureau of Vocational Education, the Community College of Allegheny County presented in-service training for advanced technology for Vocational Educators and Administrators.

The purpose of the program was to develop skills in computer applications, evaluation of software and computer based training for from at least 40 to not more than 100 participants from all campuses of the college. The main disciplines primarily included the health related professions, Business/Data processing and Engineering and related fields.

The goal of the program was to provide the participants with the background necessary to select and use appropriate software and to make recommendations for incorporating computer based training programs into the Vocational Education Curricula.

The program was an intensive short term seminar and workshop series offering 21 hours of training in: software evaluation techniques, interactive video orientation, organizational programs, applications of — Lotus 1-2-3 , Computer assisted drafting, data base, medical billing, computerized training for nursing.

At least 70 participants received approximately 16 hours of training. Evaluation was mainly survey, yielding qualitative results. Outside independent evaluators also rated the program.

The results provided information for future programs of this sort and continuing training in the area of high technology for Vocational Education.

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# THE COMPUTER AS A TEACHING TOOL

## BACKGROUND

Thousands of programs have been produced and millions of words have been written about computers. Without a doubt, the computer is a major force in shaping the educational directions of our society. According to Alan Kay, a computer software expert. (1984), " Computers are to computing as instruments are to music. Software is the score whose interpretation amplifies our reach and lifts our spirits."

It is precisely these millions of words and thousands of software scores that increase the need for educators to develop new skills to cope with the rapidly changing tools at their fingertips. But there still exists much confusion about what educators need to know and what concepts and techniques are necessary to make the computer do what one wishes it to do. Many educators feel that it is necessary to develop knowledge of specific computer hardware and operation along with skills in programming. For most instructors outside the computer disciplines, however, knowledge of how a computer operates and specific programming skills are often unnecessary.

Alan Kay goes on to say that the computer is a piece of equipment that is qualitatively different from other media like paper and clay. The computer has the ability to follow its own markings and interpret information to limits that are still not fully understood by the experts. Therefore, the task for educators or anyone else wanting to understand software is...." not simply to see the pot instead of the clay. It is to see in the pots thrown by beginners (for all are beginners in the fledgling profession of computer science) the possibility of the Chinese

porcelains and Limoges to come." (A.Kay, 1984)

It was from this perspective that the vocational education training program was developed. It was directed toward having participants look at and use software that has been produced, define its value as a tool for their particular discipline and to assess the potential of the computer as a teaching tool in their classroom.

Unlike children in the elementary school and in High school who are growing with the changes in technology and culture as the adults of today grew with television, those who are involved in adult teaching and training are pressured to quickly reshape their thinking to meet the needs of improving incoming students job qualifications.

But changing traditional ways of thinking and finding the time to retrain is not always an easy task. Educators must not only be aware of what exists in the software marketplace, but they must be able to adapt their teaching to include the computer and specific software as an interface between the students and the outcomes of the course. In some instances if there is no appropriate software available, instructors must develop their own. All this takes commitment and an enormous amount of time.

Some of the questions that many institutions have attempted to answer in the wake of the demands for re-education are: What are the obligations of a school or college for providing training to their faculty? Who do we train? How does a school begin to develop these skills in their faculty? What does faculty need to know about software and computers? How can an interest in computers be sparked and kept burning in already overworked teachers?

The Community College of Allegheny County with the assistance of Vocational Education Training Grant from the Department of Education Commonwealth of Pennsylvania has begun to answer these questions and has provided 21 hours of computer training at all levels for their vocational education faculty and administrators. Through this grant project an interest has been generated, basic skills have been developed, as have specialized ones for those with prior training. As a result of the program: the engineering departments are developing new courses in CAD, ( Computer Assisted Drawing); the nursing departments are beginning to plan for computerizing segments of their courses and data processing and business are designing new courses in languages and specific computer applications. Furthermore, the results of this training has had a ripple effect and has spread to other disciplines and requests for future training in Vocational Education areas.

The following report will describe:

- How the program was conceived and designed
- What disciplines were covered
- The audience characteristics
- What each session covered
- Evaluation procedures
- Assumptions and future directions for ongoing training.

Kay, Alan- Scientific American. September, 1984. Vol. 251, Number 3, pp. 53,54.

METHODOLOGY AND DESCRIPTION OF THE PROGRAM.

Audience

A total of 21 hours of instruction was offered to diversified disciplines from Engineering, Computer Science, Secretarial Science, Business, Allied Health and Nursing. Not only were the disciplines diverse, but levels of knowledge about the computer ranged from no experience at all to relatively high level of sophistication in programming skill.

Attendance

Seventy-six vocational educators and administrators participated with the majority attending at least 16 hours of training.

Cost Effectiveness

The total cost per person was approximately $250.00 making the training more cost effective than outside training. ( See Appendix B p. 69 for an example of outside training costs, excluding travel and room). In addition, implementing training on campus established a common base of experience from which future programs may evolve.

Developing the training sessions for a diversified audience necessitated reviewing a large amount of literature in order to select the most appropriate general topics and specific software applications for each discipline. Magazines such as BYTE, DATA TRAINING, INFO WORLD, PC WORLD, PERSONAL COMPUTING, CIDER,etc. in addition to a number of texts were read and reviews were compared (See bibliography). Computer experts were interviewed and a needs assessment was performed. Intensive preliminary preparation eleminated costly overlap of sessionsand assisted in the identification of inter-campus resources available for use in the program.

Purpose and Scope of the Program

The purpose of the program was to develop skills in computer applications, evaluation of software, and Computer Based Training for from at least 40 but not more than 100 Vocational Education Faculty and administrators on all campuses of the Community College of Allegheny County. Vocational education disciplines will primarily include the: Health Related Professions, Business/Data Processing, and Engineering.

Need

There was and continually exists a need for faculty development and training not only in the technical aspects of computer programming, but in the development and use of instructional programs that incorporate (CBT) Computer Based Training and/or computer applications as an integral part of the curriculum. Continuing training is necessary for faculty and administrators so that courses may be kept current with the increasing demands for marketable technological skills.

Problem

Vocational Education Faculty at CCAC have had few opportunities for in-depth orientation and interaction with software directly related to their teaching discipline.

Rationale

The program was designed to assist Vocational Education Faculty in becoming department "experts" and agents of change, so that they will be able to act as a resource for other faculty in their field and assist in implementing the Campus Master Plan for use of the computer as a tool in instruction.

The program emphasized intensive short term training because of a number of constraints including: hardware, software, space, and faculty time and commitment. Furthermore, the rational for a short term intensive strategy was that the learner be able to concentrate fully on the instruction without the interruption of time. That is to say, 16 hours of training concentrated in a two and a half day workshop was equivalent to a full one credit course load. Over this short period, the continuity of the instruction was maintained more easily and the learner actually observed personal progress.

Goal

To provide an orientation, rationale, and concentrated training in specific disciplines so that faculty and administrators would gain the background necessary for initiating recommendations for incorporating computer based training programs in the Vocational Educational Curricula.

Objectives

The objectives were to present a program that when completed would enable the participant to:

- Identify uses of the computer as a teaching tool
- Define how the computer is applicable to a particular discipline
- Recognize what is meant by interactive programming
- Identify levels of interactivity
- Recognize what is meant by an authoring system
- Identify criteria for intelligently selecting software
- Participate in the use of the software and demonstrate applications of specified computer programs relevant to each discipline such as: Lotus 1-2-3, a Data Base (R-base 4000) Cad Cam, Medical billing, selected nursing programs and health applications software. (See Appendix A pp.34-37 for description of different programs).

·Explain the relationship of specific computer programs to the overall curriculum.

The original proposal, designated that at least 15 hours of training was to be given to at least 40 faculty. But the actual training and seminar sessions exceeded 21 hours of training at least 16 of which was attended by 70 participants. Most all of the training except for the first days general sessions was on a one to one basis between participant and computer, making the instruction interactive and providing a solid base from which to develop skills for using the computer as a tool in the classroom.

Limitations- include both those in development and follow up:

-A common time where faculty schedules allowed them to attend.

-The availability of sufficient hardware for groups of more than 12 to work one to one with the computer.

-The availability of multiple copies of software specific to each discipline.

-The necessary resources for follow up activities eg. resource personnel familiar with programs presented, programmers and instructional designers to assist faculty in curriculum development.

-No one course or program can provide enough training on all different levels to make one an"expert". Using the computer in the classroom takes self initiative, and practice on one's own time.

-Presenting programs to a varied audience on different levels and from different disciplines may be repetative for those who have had prior training. (See Appendix A p.34 for description of different programs.)

-Introduction of advanced technology when hardware is unavailable may prove discouraging for some.

Some solutions for limitations

Availability of faculty as well as the use of equipment was surveyed and the following actions were taken:

-A time, at the end of finals just before summer break was identified and proved appropriate; release time was given for those needing it.

-To solve the hardware problem, training was provided at three campuses thus allowing hands on experience at workshops and inter-campus participation.

-The original proposal was rewritten to allow for purchase of software with educational discounts for multiple copies, because software can neither be rented nor copied.

-The program was designed so that only the first morning covered a general overview for all participants.

-The next two days provided specific hands on training appropriate to each discipline and level of competence.

The interest generated as a result of the program has led many faculty to begin to identify areas and develop courses including the computer as a teaching tool.

Future workshops may be scheduled with software demonstrated at the program, to increase faculty skill in utilizing available software.

It was assumed that although some advanced hardware such as interactive video disc systems were unavailable on all campuses, faculty must be introduced to the potential uses of the computer, and its capabilities. (See appendix C pp.72for Revised Original Proposal).

METHOD FOR DEVELOPMENT AND IMPLEMENTATION

As a first step in designing and implementing a program for Vocational Education Faculty Development, a plan was devised to assess the needs of each participating discipline. After the needs assessment was completed, the general sessions/workshop content and instructors were selected.

The steps in the development process included:

- Meeting with deans, administrators, and faculty from each separate discipline to determine the present and future directions and needs.
- Determining present level computer knowledge in each separate area.
- Identifying the topics or applications that are interdisciplinary or generalizable to the participants.
- Locating available resources such as hardware and software among the campuses.
- Researching computer languages and software including CAI and applications packages appropriate for specialized use in each discipline.
- Outlining computer skill levels required for use of software and training sessions.
- Selecting appropriate software and topics for discussion.
- Identifying skills necessary for developing computer based instruction.
- Determining most appropriate times for faculty attendance.
- Identifying and recruiting qualified instructors.
- Developing surveys and evaluation instruments to assess seminar sessions and workshops.
- Recommending a plan for follow-up support among the campuses for those wishing to revise existing courses to include CBT or to develop new courses.

After meeting with department chairpersons and interested faculty to assess the needs,it was determined that some disciplines such as engineering and data processing had very definite applications that they wanted to include in the curriculum. While others,such as the health professions and some secretarial science and business areas, were undecided as to what software programs and applications would benefit their curriculum.

After interviewing experts outside the college and reviewing research on existing software, several areas were identified that were generalizable to all disciplines. However, the participants were all entering the training program with different levels of computer competency and diverse subject areas of expertise. Because of the diversity of audience background, a decision was made to provide a general overview to all participants on the first morning. This overview would be given at an introductory level, but would cover a wide spectrum of topics such as types of computer courseware, CAI authoring languages, guidelines for evaluating software and newer technologies for instruction including interactive video.

This first section of the program mainly lecture and demonstration, (See appendix A pp.34-38,for program) served not only to provide a common background to the audience but to establish a rapport among the participants from different campuses many of whom have had little interaction on the professional level.

The needs assessment and the diverse applicability of the software programs indicated that training must be provided individually and separately for each discipline. Moreover, to gain a minimum level of proficiency with new software programs, the participants needed intensified hands on training workshops. Through professional contacts and discussions with CCAC Faculty

and those familiar with applications in each field, a session content was outlined and trainers and presenters were identified and contracted.

Each presenter and trainer was given an outline as well as objectives for their presentation session. This was done to establish a base from which to build one session on another in order to ensure the continuity of the program.

EVALUATION PROCEDURES

Evaluation of each session and the entire program was performed on a number of levels mainly through survey and performance observation.

- Participants evaluated each session and its relevance to themselves and their particular discipline.
- Participants evaluated presenters and presentation quality.
- Overall program was rated and qualitative comments were gleaned from participants to provide a direction for future training.
- During workshop sessions, successful completion of the tasks outlined by each workshop instructor was the criterion for success. No actual numberical testing scores were given as this was to be a training session with little negative implications.

A seven point rating scale was designed and was used throughout the program to maintain consistency in analyzing the data. In analyzing the data, comments and averages were given according to each separate discipline. Because the audience was mixed in their skill levels, separating scores into disciplines made it easier to make assumptions about the relevance of the program to those who were past the introductory level and those who had little experience with computers in instruction. (See Appendix A pp.39 for evaluation instruments.)

In addition, to the participant evaluations, the project director requested that two independent "outside" consulting evaluators also evaluate the program. The "outside" observers offered a non-biased description of the program as well as a valuable assessment of the relevance and continuity of the sessions to the audience. These evaluators were present for all the general sessions. The consulting evaluators, both experts in the field of curriculum design and instructional design, work with faculty in colleges and universities to assist in structuring courses and in evaluating the relevance of the courses to the overall curriculum. (See Appendix B p.62-70 for complete evaluator's reports.)

Finally, the training sessions were task oriented and designed to introduce procedures for computer applications. The criteria of success in these workshops were participation and interaction with the software. Success was expressed by the participant 's ratings, comments and ability to complete the training projects.

Results

A short description of each session will be given followed by the average rating in two areas: 1. Its relevancy to the participant's teaching situation 2. The quality of the speakers presentation. The averages will then be followed by participants' comments, independent evaluators comments (if applicable) and assumptions made by the project director.

---

DAY ONE

SESSION 1. COMPUTERS AS A TEACHING TOOL-

Included a description and demonstration of various ways to use the computer in an instructional setting. This description covered: computer assisted instruction, computer simulations, application packages as well as an overview of authoring systems.

PRESENTER: Louis Berry, Ph.D., Assoc., Professor Educational Communications and Technology University of Pittsburgh.

RATINGS: Scores are averages from 1 lowest to 7 highest. ( See Appendix A p. 39 for evaluation form.)

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 5.1 | 5.6 |

Sample Participant Comments:
"Good overview" (Engineering)
"Basic level, easy to understand, interesting" (Nursing)
"Speaker assumed the faculty was computer illiterate" (Data Processing)

Independant Evaluator's Comments: "The general session was designed to provide basic instruction and as such, presumed minimal entering skills. This design is appropriate for a seminar of this sort since it allows ease of entry for novice participants."

"Dr. Berry's lecture was necessary to set the stage and he was well prepared and informed. The audience was attentive and his presentation was well received."

ASSUMPTIONS:

Although the overall rating was favorable to this session, several participants with extensive knowledge of the computer were unreceptive to the introductory session. These comments represented by the one above comprised only about 5% of the audience. It is assumed that when presenting to a mixed audience, no knowledge of the subject area is taken for granted. This presentation set the foundation from which to build subsequent more technical sessions.

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SESSION 2. COURSE DESIGN FOR USING THE COMPUTER AS A TEACHING TOOL

A case study describing the development of a concept into an interactive format. This session introduced faculty to the medium of interactive video and its different levels. The presenter went on to describe the development of a nursing program using interactive video to teach decision making skills for nursing.

PRESENTER: Gloria Lambardi, RN, MS. Assoc., Professor Nursing. County College of Morris Randolph, N.J., Co-Project Director of Grant for Interactive Video Disc Course Design.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 3.8 | 4.3 |

Sample Participant Comments:
"O.K."
"Samples of demos useful"
"Moved too rapidly was confusing at times"
"Seemed too far in the future for CCAC"

Independant Evaluator's Comments: "This general session provided a demonstration of a computer-based instructional teaching unit and a case study of an interactive program that was of interest to both the novice and the more experienced participant. This strategy helped to ensure that each participant was able to benefit from the general sessions, regardless of his or her experience to date."

"Lombardi was well prepared,and captured the attention of the audience by the use of video disc and computer, and kept their attention by her demonstrations."

ASSUMPTIONS:

For the most part, this session was enthusiastically received. But some participants felt that video-disc technology was either irrelevant to their disciplines or out of reach for the College. It seemed essential in a program of this type to introduce faculty to future trends and directions of computerized instruction. In justifying introducing video disc technology, it was assumed by the project director that interactive video in the next five years will become less expensive and provide some of the most exciting and effective training programs in education.

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SESSION 3. ACTRONICS-BIO MEDICAL SYSTEM

A demonstration of a totally self contained; instructional unit for Cardio Pulminary Recussitation Training. This session was not evaluated since it was a follow up to the previous session and a demonstration of a high level of interactivity with video peripherials, and computer. This was presented by the developers of the system which is commercially available through ACTRONICS.

---

SESSION 4. CRITERIA FOR EVALUATION OF SOFTWARE

This presentation covered the points to look for when selecting software for instruction.

PRESENTER: William Walker, Ph.D., Director of Research and Development ICM School of Business.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 5.3 | 5.4 |

Sample Participant Comments: "Relevant."
"Kept at basic level, a lively speaker"
"Well planned, well prepared"

Independent Evaluator's Comments: "A session on Criteria for Evaluation of software contributed to the participant's general introduction to the field by providing a comprehensive set of generic assessment categories for the evaluation of particular computerized packages and programs of instruction."

"Walker presented criteria for evaluation of software in textbook fashion, but this seemed effective, judging from the attentiveness of the audience."

ASSUMPTIONS:

From the Evaluations, it seems that the type of direct step by step approach used by Dr. Walker when discussing criteria for software evaluation appealed to the audience. But it is assumed that while this type of approach is invaluable as an introduction and for a general audience; actual practice in applying the criteria is the only way to develop competence in software selection. This session served to present guidelines for assessing software used late in the program.

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This section of the program ended the general sessions. These sessions provided a basis and foundation for all of the faculty. The remainder of the sessions would be directed to specific disciplines and actual hands on experience in subsequent workshops.

Day One: Contd.

Afternoon sessions Day one were separated according to discipline

SESSION A: PROGRAMMING LANGUAGES (See Program Appendix A pp.35,36)

Engineering and Data Processing faculty attended a session on Computer Languages. This session presented to those familiar with the more common computer languages, a description of the capabilities and differences among the less common languages such as LISP, "C", LOGO, ADA. These languages are becomming increasingly popular. It seemed appropriate for those involved in the computer sciences and engineering to be aware of the unique capabilities of these languages and their uses in the market place. For example, ADA is now a requirement for those seeking government jobs in programming.

PRESENTER: David Artman, General Manager-Quintic Software Development associated with Carnegie Mellon University.

| Relationship to Discipline | Quality of Presentation |
|---|---|
| 5.0 | 5.0 |

Sample Participant Comments:
"Discussion Good"
"Discussion Fragmented"
"Usable in Course"

Independent Evaluator's Comments: "The Content of this session focused heavily on the language "C" and compared it to other instructional programming languages such as LISP AND ADA. The presenter also provided comparisons with BASIC, FORTRAN AND PASCAL in describing some of the strengths and limitations of "C". While really a "C" advocate, he readily and competently responded to participant questions about other languages. The extent and nature of those questions indicated that this content was extremely relevant to those who elected to attend this session."

ASSUMPTIONS:
It is assumed that faculty involved in computer language teaching should periodically review new developments in the marketplace, for use of diverse languages. They should be kept abreast of the capabilities of different languages and their applications to various areas of the job market.

---

SESSION B: NURSING AND ALLIED HEALTH

This session covered the development of an interactive video program in decision making skills for the health fields. The presenter outlined the concepts of the program, how the program was conceived its intended audience, and its implementation. Also, the presenter pointed out to the faculty how they may use the computer and video both in the lab and in the classroom as a simulator and as an interactive teaching tool.

PRESENTER: Gloria Lambardi, RN., M.S. Associate Professor Nursing, County College of Morris, Randolph, N.J.

| Relationship to Discipline (Nursing) | Quality of Presentation (Nursing) |
|---|---|
| 5.72 | 5.9 |
| **Relationship to Discipline (Allied Health)** | **Quality of Presentation (Allied Health)** |
| 4.81 | 4.9 |

Sample Participant Comments: "Much better than initial presentation, personal appeal and application."
"Explained a little better, we were familiar with her field".
"Made the morning presentation more meaningful."

No outside Evaluator attended this presentation.

ASSUMPTIONS:

From discussion with the presenter and the audience ratings, two assumptions were made. First, the presenter felt more comfortable demonstrating interactive video in her own field—the health professions. Second, the audience was more attentive when concrete examples were discussed and related to a specific health topic. In the future, more meaningful presentations and workshops should be designed with concrete examples from a specific discipline. In this way, the participants are shown direct relationships in their own area of expertise. This eliminated the assumption that all participants will be able to make a meaningful transition from software techniques used in other disciplines to their own area of expertise.

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SESSION C: Secretarial Science

This session presented on exemplary project for using the computer and word processing to teach writing skills.

PRESENTER: Glynda Hull, Ph.D., David Bartolome, Ph.D., Research Fellows
Learning Research and Development Center, Pittsburgh, PA 15260.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 4.2 | 6.6 |

Sample Participant Comments:
"Well developed, will be extremely useful"
"Good presentation, however was of no value to my field"
"Good presentation"

Independent Evaluator's Comments:
"Dr. David Barthelome's presentation was actually the stronger of the two and he might be considered as a future resource."

ASSUMPTIONS:

It was assumed that by introducing an exemplary research program stressing writing and the computer, faculty in Secretarial Science and Business would find useful ideas for developing similar projects in teaching letter writing skills with the computer.

Although the program received good ratings on presentation quality, it received only fair scores on relevancy to teaching situation.

(The persons giving it a high reating may have been word processing instructors.)

It is assumed that when introducing exemplary programs, a concrete link should be provided to the audience that would facilitate the conceptual connections with the existing courses of study. It may then be easier for participants to see the parts of the exemplary program that are relevant to their own situation.

---

SESSION D: MANAGEMENT, BUSINESS AND ADMINISTRATORS, ENGINEERS (OPTIONAL)

Project Scheduler

A demonstration and tutorial with hands on experience with a computerized management system for organizing interrelated tasks and assisting in answering "What if Questions".

PRESENTER: Brady Bisson, P.E., Civil Engineer, Computer Research, Inc.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 5.7 | 3 |

ASSUMPTIONS:
This software applications package was seen as valuable. However, the presentation style did not adequately fill the needs of the audience. The project scheduler package is valuable for future presentations, but using a different presentation approach.

OVERALL RATING DAY ONE- 5.7

DAY TWO

Business, Data Processing, Secretarial Science

WORKSHOP: LOTUS 1-2-3 (NORTH CAMPUS)

This was a hands on training session. 6½ hours intensive training in spreadsheet application.

TRAINER: Roger Duffy, B.S.,M.A., Training Specialist, Management Information Systems, Westinghouse Nuclear Operations Division.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 5.3 | 6.25 |

Sample Participant Comments:
"The seminar was invaluable, it will help when developing applications software course."
"More of the same"
" I understand they usually present this in 3 separate 2 hour session. It was a lot of material in a compressed time period."
"Very well done informative."

ASSUMTIONS: The intensiveness of this class may have proved a challenge for some. But, the majority of the participants felt they acquired enough skill in one workshop to develop course work on their own. This session was intended for those with experience. It is assumed that the ones who had any difficulty (only 2 participants) lacked some of the necessary background computer experience."

DAY TWO & THREE

WORKSHOP: CAD (BOYCE CAMPUS)

Day 2 and Day 3 were comprised of workshops and with various applications and practical hands on training.

Engineers participated in a day and a half of CAC (Computer Aided Drafting) training for the microcomputer the TI-Professional.

This session held interest and was given excellent ratings in all catagories by the Engineers who found the training very useful for developing the skills needed for incorporating computer training in the classroom. In the 10 hours of intensive training. Engineering faculty developed specific skills in operating the Computer Assisted Drawing software for the Texas Instrument Professional microcomputer.

TRAINER: Thomas Lubanovic,P.E., Assoc. Professor, Civil Engineering, CCAC-Boyce Campus.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 7 | 6.7 |

Sample Participant Comments:
"Very Good"
"Carefully presented materials--very well done"
"Excellent"

ASSUMPTIONS:
This was specifically requested and seen as extremely valuable and is now being used. From the lack of negative comments and the extremely high ratings it is assumed that this type of practical applications training provided the necessary skills for faculty to begin to structure their own coursework.

---

DAY TWO

WORKSHOP: NURSING AND ALLIED HEALTH

This workshop covered the design, development and implementation of computerized instruction for nursing and health. Explanations of problems involved in initiating and developing modules of instruction presented, along with demonstrations of courseware developed for Harrisburg Community College.

TRAINERS: Kay Huber, M.S.N.
Diana Wells, M.S.N.
Anthony Filippelli, RTT
Harrisburg Area Community College

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 6.00 | 5.9 |

Sample Participant Comments:
"Very well done, inspirational, I'd like to start developing my own software."
"Huber was excellent"
"Information from Harrisburg Good"
"Excellent. Helped me to understand the "whys" and "how to's".

ASSUMPTIONS:
It was assumed that presenting case studies and exemplary programs in Computer Based Instruction would increase the interest in using computering in the health and nursing curriculua.

---

DAY TWO

PRESENTATION: COMPUTER USES IN HEALTH CARE

This session covered a demonstration of the uses of the computer in the hospital setting. Dr. Pennock was one of the original developers of computer software on Blood Gas. After an explanation of the program, participants were given the opportunity to interact with the program on a one to one basis.

TRAINER: Bernard Pennrock, Ph.D., Assoc. Professor, School of Medicine, University of Pittsburgh.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 4.18 | 5.00 |

Sample Participant Comments:
"Very well presented clear and sequential"
"Not directly related to my field, I found it a little boring"
"Nice use of analogies."

ASSUMPTIONS:
It was assumed that practical demonstrations of the actual use of software in the work setting would provide valuable insight into the computer and its uses in the field of health.

---

TWO LEVELS OF DATA BASE TRAINING WERE PROVIDED ON DIFFERENT CAMPUSES.

DAY THREE

SESSION A Data Processing, those with Computer Experience-Data Processing Lab
R:base 4000 (BOYCE CAMPUS)

Data Base software is a tool that lends itself to almost all disciplines and facets of education. Learning data base application will help the instructor manage instruction as well as provide a skill that is applicable to establishing data relationships in any discipline.

R:base 4000 was selected because reviews indicated that the documention was superior and its operaton faster than several of the leading data bases. The also offered an Artificial Intelligence tutorial package.

TRAINER: Edmund Weihrauch, M.B.A., Assoc. Professor Computer Science CCAC, Boyce Campus.

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 6.5 | 6.5 |

Sample Participant Comments:
"CCAC should have more workshops of this sort and length. This one should have been a little longer."
"Useful would have liked a longer session. Excellent"
"Definitely more effecitve than D base II
" Just what I wanted"

---

SESSION B: Nursing, Allied Health, Business or those with Minimal Computer Experience. ORIENTATION TO DATA BASE R:base 4000 (NORTH CAMPUS)
Note: Changed from originally scheduled ALLEGHENY CAMPUS.

TRAINER: David Artman, B.S., General Manager, CUINTIC, Software Department Carnegie-Mellon. Franklin Kern,

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 4.0 | 5.0 |

Sample Participant Comments:
"Compliments for doing a good job with a mixed group"
"Would like to attend an all day session"
"Too advanced for my level"
"Informative, very informative, presented very well"
"Words, words, words, it would have been useful to divide group into disciplines"

Independent Evaluator's Comments on General Session at North Campus:

"This presentation was at Allegheny North Campus. Both presenters Artman and Kern were extremely knowledgebale of the content--R:base 4000. In using this more sophisticated and powerful data base, both acknowledged that they had the obvious problem of reducing several three-credit courses at CMU to a three hour presentation. They are to be commended for the smoothness of the resultant presentation. The most obvious problem of the presenters was the paucity of examples they could use to which the audience could relate. It may have helped the audience to use a case study approach--working one set of data or one example through the configurations possible in R;base 4000.

The minor delay because of the unexpected blank diskettes was quickly handled and the time was recouped by those who just wanted a few minutes. It was a real situation, because this can happen in actual teaching situations."

Overall, the presentation and the system presented seemed to be very usable in their situations. This was reflected in the questions, attention, and actual practicing of the faculty.

ASSUMPTIONS:

It was assumed that Data Base training was relevant to all disciplines and that separating the audience into skill level would allow all to have hands-on training. It is also assumed that an introduction was sufficient for a basic understanding of data bases. From the comments all wanted longer, more specific applications. At this session, we contracted with the trainers to do a full day session on a Saturday to continue with in depth training in data base. (This constituted a day four workshop on R;base 4000, see brochure Appendix A, p. 38 )

In the general session more relationships of data base to specific situations was needed.

---

WORKSHOP: FULL DAY TRAINING SESSION IN-DEPTH R:base 4000 APPLICATION
June 9, 1984

In this session, participants learned the commands to call up relational information, to create their own data base. Participants worked with the computer on a one to one basis. The instructors wrote their own 45 page set of instructions to simplify the process and took the participants setp by step through each command sequence.

TRAINERS: David Artman, Franklin Kern

| Relevancy to Teaching Situation | Quality of Presentation |
|---|---|
| 6.85 | 6.99 |

Sample Participant Comments:
"Extremely informative"
"Excellent preparation"
"Level was effective for all present."
"Great deal of information, clear, excellent."

ASSUMPTIONS:

It is assumed that data base operation is of great interest to most faculty. Twenty signed to attend a Saturday all day session. Actual attendance was 11. But after 3 hours of previous training the 3rd day of the training workshop faculty gave up their Saturday to attend another 6½ hours of training. These faculty are highly motivated and will use the skills acquired in these workshops.

It is also assumed that training in itself is insufficient to provide skill in R:base application. Practice is necessary to make one proficient and efficient.

In summary, the initial results of the program were positive and the training well received. Many faculty requested continued programs of this type with other faculty members in their own discipline. As mentioned previously, several courses have already been developed as a result of the training and will be offered in Engineering and Data Processing in the 1984-85 school year.

The results also show an interest in continued sharing of ideas and the need for assistance in structuring software. Training is only the beginning, it is the practice of the skills acquired that is the proof of a successful program.

ANALYSIS

The structural organization and the high quality of the presentation, combined with the participants' enthusiasm all contributed to successful attainment of the goal. The well developed program maintained a continuity, building from general topics to specific skill applications for each separate discipline. Objectives outlined in the original proposal were reached. Skills in evaluating software and using it were demonstrated by interaction in the session and completion of the tasks required in the special workshops. Furthermore, the questionnaires surveyed the participant's personal opinions about the relevance and the quality of each presentation and workshop. See Appendix B.

After the frist day's attendance, most participants were able to identify uses of the computer as a teaching tool, define some ways to utilize the computer in their discipline and apply general criteria to selection of software.

After participating in the individual workshop sessions, faculty were able to use the software with minimal or average levels of skill. They ~~have~~ also began to develop or stated that they have intentions of developing courses, with the software demonstrated in the workshops where they received training. The Engineering Department at Allegheny Campus is designing an introductory course on CAD for the 1984 Fall Term. On the same campus, the Computer Science Department will introduce a new course on data base application in the Spring of 1985. Nurses from 3 campuses have requested continuationof training. They are beginning to review and develop software to include in their curriculum. Allied Health Professors

professors are incorporating training in computerized medical billing in the Spring of 1985. Secretarial Science intends to teach letter writing on the computer using word processing applications in the Spring or Fall of 1985.

In developing a program of this sort where information is presented across disciplines, there is always the assumption that participants will make a conceptual leap from what has been developed for one area to their own area of expertise. But this is seldom true for all participants. Some always leave with the feeling that what was presented had little relationship to them. Often, the presenter must make the connections for the audience. For example, interactive video was demonstrated on several levels but mainly in the health areas. Some engineers and data processing people saw no relation of the interactive technique to their particular area of teaching. In fact it is the technique of using a visual with the capability of simulating reality that is relevant to almost any topic or course where visuals are needed to present the concepts.

Finally, when presenting on a general level, or to those from a variety of levels, the presenter must assume the lowest level of knowledge so as not to lose those who have little background. But some negative comments were voiced by those who have had extensive programming experience and felt their level of expertise was above the first two program overview sessions describing different uses of the computer.

DISSEMINATION

The final report will be sent to the participating Vocational Education Departments on each campus. A copy will also be sent to the trainers and presenters, the Central Office of the Community College of Allegheny County, and to each of the Campus' Vice-Presidents.

The report will be valuable in structuring continued training for the participating faculty. Future training should build on what has already been accomplished. It should continue by discipline and recognize the background experience and level of skill that each faculty member has achieved.

CONCLUSIONS AND RECOMMENDATIONS

The program in general was successful for a number of administrators and faculty on several levels. First, it generated enthusiasm and interest in using the computer. Second, it provided participants with "hands on" training and enough elementary background skill in software usage to begin to incorporate particular computer programs into their courses. Third, the program sessions brought faculty together from different campuses and gave them the opportunity to interact and share ideas about past accomplishments and the directions they were moving toward in the future.

In their comments faculty expressed the desire to develop new methods of instruction. In light of the comments, the training program proved to be an excellent way to stimulate interest in computer technology. It should be looked upon as a beginning rather than an end.

The long term effects of the program will depend on the skill and perceptivity of each faculty participant in using the computer's best capabilities.

The question of computer replacing or reducing the number of faculty was never raised. Instead, the consensus of the participants seems to be that the computer is a tool that will elevate the quality of education by providing individualized experiences for students in simulation, drill and practice and computer assisted instruction. Faculty here at CCAC tend to realize that they will continue to deal with students on a personal basis and many see the computer as a powerful tool for improving the effectiveness and efficiency of their teaching as well as an instrument that will increase marketable skills for their students.

For these reasons, the faculty who attended the program and training are aware of the necessity to keep up with technological changes. They

assume that incoming students will be increasingly computer literate. These students will expect to see the availability of computer facilities and classes better or at least as good as the ones they had in high school.

The constantly changing field of technology and the need for continuing curricular change obliges faculty to maintain some level of expertise in the field of computer technology. It also presents a responsibility to the administration to provide the resources, training and incentive for faculty.

Recommendations for Future Programs

After compiling the results of the surveys, faculty comments, independent observer's evaluations, the following suggestions are recommended for future programs and for continued training in computer technology.

- If the audience background level is varied, separate them according to skill level and avoid general sessions.
- When demonstrating unfamiliar or new technology to faculty make concrete suggestions on how this new technology will be of value for improving instruction in their field of expertise. Do not assume that all faculty will be able to see the relationships and the value of the technology to their particular discipline.
- Provide ongoing training and schedule informal meetings among faculty who are working on similar projects.
- Offer seminars periodically to keep faculty informed of new developments in hardware or software that may be of benefit to their teaching.
- Organize a consultant's pool of experts ( may be graduate students at at local universities) to act as resources or programmers for faculty who are in the process of designing CAI courses or using specific applications packages. These consultants could be paid by the hour or per diem. Not only would a consultant's pool be cost effective, but it would provide the broadest scope of expertise and skills difficult to find in a single individual.
- Publish a newsletter or include a column in an already existing one where faculty from different campuses could share accomplishments and new course offerings. Often their are faculty on one campus who would be willing to assist faculty from other campuses.
- Foster the establishment of intercampus faculty groups where all faculty from a single discipline can meet, socialize and discuss developments, new ideas and problems.

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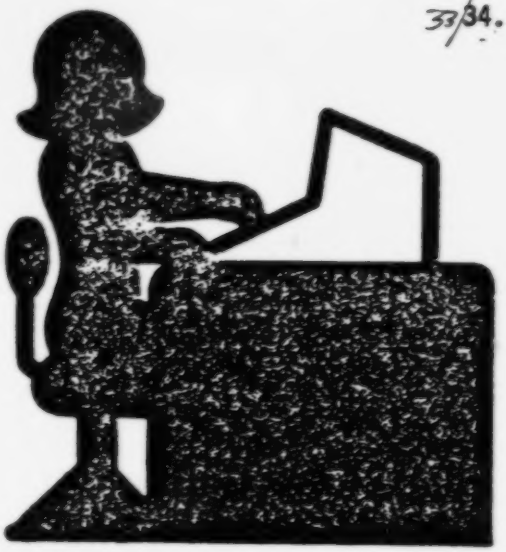
# THE COMPUTER AS A TEACHING TOOL



**DISCIPLINES:**

**Engineering Areas**
**Nursing**
**Allied Health**
**Business**
**Secretarial Science**
**Data Processing**

## An Inter-Campus Seminar and Workshop for Vocational Education Faculty and Administrators.

**May 21-23,**

CCAC COMMUNITY COLLEGE OF ALLEGHENY COUNTY

Supported by: The Bureau of Vocational Education Department of Education Commonwealth of Pennsylvania

# FIRST DAY

## MONDAY, MAY 21, 1984

35

### ALLEGHENY CAMPUS

**GENERAL SESSION**

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | L-504 |
| 9:00-9:10 a.m. | Opening Remarks | **Larry Whitworth, Ph.D.**<br>Vice President of Educational Services - CCAC<br>Theater |
| 9:10-10:15 a.m. | COMPUTERS AS A TEACHING TOOL<br>● Computer assisted instruction,<br>● Application packages<br>● Authoring systems - an overview | **Louis Berry, Ph.D.**<br>Assoc. Professor, Educational Communications and Technology<br>University of Pittsburgh |
| 10:15-10:30 a.m. | Break | |
| 10:30-11:30 a.m. | COURSE DESIGN FOR USING THE COMPUTER AS A TEACHING TOOL: A CASE STUDY THAT WILL:<br>● Explain development of concept into interactive format<br>● Define interactive video<br>● Describe development of interactive teaching program | **Gloria Lombardi, R.N., M.S.,**<br>Assoc. Professor, Nursing<br>County College of Morris<br>Randolph, N.J.<br>co-project director of Grant for Interactive Video Disc Course Design |
| 11:30 a.m.-12:15 p.m. | ACTRONICS - BIO-MEDICAL SYSTEM<br>● A demonstration of a totally self-contained instructional unit. | **Mary Bendors,** CPR Instructor,<br>Accounting Analyst,<br>Marketing Specialist<br>Actronics - Pittsburgh, PA |
| 12:15-1:15 p.m. | Lunch | Catered at West Hall |
| 1:15-1:30 p.m. | Return to General Session | Theater |
| 1:30-2:25 p.m. | CRITERIA FOR EVALUATION OF SOFTWARE<br>● Qualities to look for when selecting software for instruction | **William Walker, Ph.D.**<br>Director of Research and Development, ICM School of Business |

**SESSION A**

| | | |
|---|---|---|
| 2:30-3:45 p.m. | ENGINEERING AND DATA PROCESSING<br>Computer Languages<br>● A description of the capabilities and differences between some of the languages, such as LISP, "C", LOGO, ADA | **David Artman, B.S.**<br>General Manager, CUINTIC,<br>Software Development Company<br>Carnegie-Mellon University<br>L-504 |
| 3:45-4:30 p.m. | HANDS ON AND DEMONSTRATIONS<br>● Using a variety of software for education including Video Disk and Bio-Medical CPR System | Theater |

**SESSION B**

| | | |
|---|---|---|
| 2:30-3:30 p.m. | NURSING AND ALLIED HEALTH<br>Developing interactive instruction in health and nursing | **Gloria Lombardi, R.N., M.S.**<br>Associate Professor Nursing<br>Theater |
| 3:30-4:30 p.m. | Demonstration–Theater | |

**SESSION C**

| | | |
|---|---|---|
| 2:30-3:30 p.m. | SECRETARIAL SCIENCE<br>USING THE WORD PROCESSOR TO TEACH GENERAL WRITING SKILLS<br>● application to general letter-writing skills | **Glynda Hull, Ph.D.**<br>Post Doctoral Research Fellow<br>Learning Research and Development Center<br>University of Pittsburgh<br>L-213 |
| 3:30-4:30 p.m. | Demonstration–Theater | |

**SESSION D**

| | | |
|---|---|---|
| 2:30-4:30 p.m. | MANAGEMENT, BUSINESS AND ADMINISTRATORS, ENGINEERS (Optional)<br>Project Scheduler<br>● A computerized management system for organizing interrelated tasks and answering "what if" questions. | **Brady Bisson, P.E.**<br>Civil Engineer<br>Computer Research, Inc.<br>M-436 |

# SECOND DAY

## TUESDAY, MAY 22, 1984



### NORTH CAMPUS

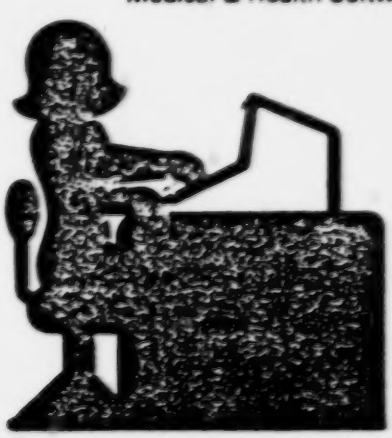
| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00 a.m. Promptly | BUSINESS, DATA PROCESSING, SECRETARIAL SCIENCE<br>LOTUS I-II-III Spreadsheet Application | **Roger Duffy, B.S., M.A.**<br>Training Specialist<br>Management Information Systems<br>Westinghouse Nuclear<br>Operations Division |
| 10:15-10:30 a.m. | Break | |
| 10:30 a.m.-12:15 p.m. | Training Continued | Computer Lab |
| 12:15-1:15 p.m. | Lunch | |
| 1:15-4:30 p.m. | LOTUS Training (Continued) | |

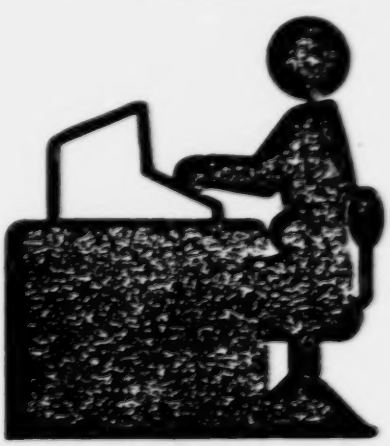
### BOYCE CAMPUS

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00-10:15 a.m. | CAD<br>Computer-aided design and drafting systems with true professional capabilities built around the high performance Texas Instruments Professional Computer. You will learn to:<br>● Create drawings<br>● Edit existing drawings<br>● Insert parts, features or entire drawings within drawings<br>● Develop standard symbols to use with all drawings | **Thomas Lubanovic, P.E.**<br>Assoc. Professor, Civil Engineering, CCAC - Boyce<br>CAD Lab |
| 10:15-10:30 a.m. | Break | |
| 10:30 a.m.-12:15 p.m. | Training Continued | |
| 12:15-1:15 p.m. | Lunch | |
| 1:15-4:30 p.m. | Training Continued | |

### ALLEGHENY CAMPUS

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00-10:15 a.m. | NURSING AND ALLIED HEALTH<br>Organizing Instructional Content for developing Computer Based Instruction.<br>● A description of a program.<br>● Problems involved in developing a program. | **Kay Huber, M.S.N.**<br>Director of Nursing<br>**Diana Wells, M.S.N.**<br>Assistant Professor, Nursing<br>Harrisburg Area Community College<br>Theater |
| 10:15-10:30 a.m. | Break | |
| 10:30 a.m.-12:15 p.m. | COMPUTER USES IN HEALTH CARE | **Bernard Pennrock, Ph.D.**<br>Assoc. Professor, School of Medicine, University of Pittsburgh |
| 12:15-1:30 p.m. | Lunch | |
| 1:30-4:30 p.m. | Demonstration and Hands on Medical & Health Software Programs | Theater |





# THIRD DAY

## WEDNESDAY, MAY 23, 1984



### BOYCE CAMPUS

*Engineering*

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00-10:15 a.m. | CAD Training (Continued | Thomas Lubanovic, P.E.<br>Assoc. Professor, Civil<br>CAD Lab |
| 10:15-10:30 a.m. | Break | |
| 10:30 a.m.-12:30 p.m. | Training (Continued) | |

### BOYCE CAMPUS

**SESSION A**

*Data Processing, those with Computer Experience - Data Processing Lab*

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00-10:15 a.m. | R:base 4000<br>● Data base training with a powerful system easier to use than others with similar capabilities. | Edmund Weihrauch, M.B.A.<br>Assoc. Professor<br>Computer Science<br>CCAC, Boyce<br>Computer Lab |
| 10:15-10:30 a.m. | Break | |
| 10:30 a.m.-12:30 p.m. | Training (Continued) | |

### ALLEGHENY

**SESSION B**

*Nursing, Allied Health, Business or those with Minimal Computer Experience.*

| | | |
|---|---|---|
| 8:30-9:00 a.m. | Check-In and Coffee | |
| 9:00-10:15 a.m. | ORIENTATION TO DATA BASE<br>R:base 4000 | David Artman, B.S.<br>General Manager, CUINTIC<br>Software Development<br>Carnegie-Mellon |
| 10:15-10:30 a.m. | Break | Theater |
| 10:30 a.m.-12:00 Noon | Training (Continued) | |

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## REGISTRATION FORM

**Deadline for Registration - Wednesday, May 9, 1984**

**MUST ATTEND FULL PROGRAM**

Name _____

Address (Home) _____

Address (Campus) _____

Phone Number _____

**Mail This Form to:**
**J.V. Dunn, Ph.D.**
**M-523, Allegheny Campus**
**808 Ridge Avenue**
**Pittsburgh, PA 15212**
**Phone: (412) 237-2628**

Title _____ Position _____
(Needed to Award Stipend)

Social Security Number _____ Class Coverage Needed: _____ Times: _____

Session Choices:
Day 1: - 2:30 p.m. *(Check One)* ☐ A ☐ B ☐ C ☐ D
Day 2: - All Day Sessions Cad (Boyce Campus) ☐ Lotus I-II-II (Center-North) ☐ Health (Allegheny Campus ☐
Day 3: - Half Day Data Base Sessions - (A) Boyce (With Computer Experience ☐ Allegheny (Basic Introduction) ☐

# Database Training

## Hands on Experience with R:base 4000 for Voc Ed. Faculty and Administrators

***(Continuation of Voc Ed. Training Grant.)***

*When:* ..... *Saturday June 9, 1984*

*Where:* ..... *Allegheny Campus or North Campus (depending on number of Participants)*

*Full day:* ..... *9:00 a.m. to 3:30 p.m.*

***Limited registration***

---

**Registration Form: Registration Deadline is Friday June 1st.**

---

*Name:* _____

*Address: School* _____

*Work* _____

*Phone: School* _____ *Home* _____

*Department:* _____ *Position* _____

***Trainers:***

***David Artman**, Quintic Software Development, Carnegie Mellon University*

***Franklin Kern**, Carnegie Mellon University*

*Return to:* ***Joanne Dunn**, 808 Ridge Avenue, M-523, Pittsburgh,Pa. 15212*

THE COMPUTER AS A TEACHING TOOL

May 21, 1984

First Day Evaluation

Name (optional) or
Social Security number_____

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this program.*

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of each program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Specific Program Sessions

Session 1. Computers as Teaching Tools: L. Berry

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

2. Course Design: A Case Study: G. Lombardi

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

3. Criteria for Evaluation of Software: W. Walker

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

4. Check one session:

_____A. Computer Languages: D. Artman
_____B. Interactive Nursing Instruction: G. Lombardi
_____C. Word Processing General Letter Writing: G. Hull
_____D. Project Scheduler: B. Bisson

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

*For purposes of the grant-participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212.

General Program Appraisal

1. Using the 1-7 rating scale, what is your overall rating of this first program day? _____

2. What subjects or topics presented during this program would you like to see presented in more depth at another program?

3. What other subjects or topics related to computers and teaching would you like presented in the future?

4. Additional comments:

THE COMPUTER AS A TEACHING TOOL

Second Day Evaluation

Name (optional) or
Social Security Number_____

LOTUS - NORTH CAMPUS

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this workshop*

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of this program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

Using the 1-7 rating scale what is your overall rating of this workshop?_____

Additional comments:

*For purposes of the grant participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212 -or- return it to your training instructor.

## THE COMPUTER AS A TEACHING TOOL

Second Day Evaluation

Name (optional) or
Social Security Number_____



Health - Nursing and Allied Health

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this program

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of each program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Nursing and Allied Health: Huber, Wells, Filippelli
Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

Computer Uses in Health Care: Pennock
Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

Using the 1-7 rating scale, what is your overall rating of this program?_____

Additional Comments:

What Demonstration programs did you observe or try? Which ones do you think are of value in your teaching situation?

*For purposes of the grant participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212 -or- return it to your training instructor.

THE COMPUTER AS A TEACHING TOOL

Second Day Evaluation

Name (optional) or
Social Security Number_____

CAD - Boyce Campus

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this workshop*

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of this program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Relevant to your teaching situation?____
Quality of speaker's presentation?____
Comments_____

Using the 1-7 rating scale what is your overall rating of this workshop?_____

Additional comments:

*For purposes of the grant participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212 -or- return it to your training instructor.

Third Day Evaluation

Name (optional) or
Social Security Number_____

Introduction to Data Base

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this Workshop.*

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of this program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Introduction to Data Base:

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

Using the 1-7 rating scale, what is your overall rating of this workshop?_____

Additional Comments:

* For purposes of the grant participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212 -or- return it to your training instructor.

Sat. June 9

Fourth Day Evaluation

Name (optional) or
Social Security Number____ _____

Introduction to Data Base

Purpose of Evaluation The purpose of this evaluation is to determine the strengths and weaknesses of this Workshop.*

Professional Data

1. What is your teaching discipline?_____

2. How long have you been teaching?_____

Rating Scale Please use the following scale to rate specific aspects of this program session:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Poor | | Fair | | Good | | Excellent |

Introduction to Data Base: Artman, Kern

Relevant to your teaching situation?_____
Quality of speaker's presentation?_____
Comments_____

Using the 1-7 rating scale, what is your overall rating of this workshop?_____

Additional Comments:

* For purposes of the grant participants must submit this form to Joanne V. Dunn, CCAC, M-523, 808 Ridge Ave., Pittsburgh, PA 15212 -or- return it to your training instructor.

APPENDIX B

RAW DATA



Includes rating charts and session comments followed by independent evaluator's description of the program.

COMPUTERS AS A TEACHING TOOL

DAY 1.

Computer assisted instruction
Application packages
Authoring systems-an overview

Louis Berry, Ph.D., Assoc. Professor, Educational Communications and Technology
University of Pittsburgh

DAY 1 SESSION 1

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | 1 | 7 | 1 | 1 | | | | | 5 | 2 | 3 |
| Nursing | | 1 | 1 | 2 | 12 | 5 | 5 | | | | 5 | 5 | 7 | 9 |
| Engineering | | | | 1 | 5 | 1 | | | 2 | | | | 3 | 1 |
| Secy.Science/ Business | | | 1 | | 3 | | | | | | | 1 | 1 | 2 |
| Computer Science Data Processing | 1 | 1 | 1 | | 2 | 1 | | | | 2 | | 2 | | 2 |
| Misc(Admin) | | | | | 2 | 2 | 1 | | | | | 2 | 2 | 1 |

OVERALL RATING 5.1 5.6

COURSE DESIGN FOR USING THE COMPUTER AS A TEACHING TOO: A CASE STUDY THAT WILL:

Explain development of concept into interactive format
Define interactive video
Describe development of interactive teaching program

Gloria Lombardi, R.N.,M.S.,
Assoc. Professor, Nursing
County College of Morris
Randolph, N.J.

DAY 1 SESSION 2

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | 3 | 3 | 4 | | 1 | | 3 | 2 | | 5 | | 1 |
| Nursing | | 2 | 2 | 2 | 6 | 9 | 4 | 1 | 2 | 2 | 8 | 6 | 4 | 2 |
| Engineering | | | | | 6 | 1 | | | | 2 | 1 | 3 | 1 | |
| Secy.Science/ Business | | | 1 | 1 | 1 | | 1 | | | 1 | 2 | 1 | | |
| Computer Science Data Processing | | 2 | 1 | 1 | 2 | | | | 2 | | 3 | 2 | | |
| Misc(Admin) | 1 | | | | 1 | 1 | 1 | | | 1 | | 3 | 1 | |

OVERALL RATING 3.8 4.3

CRITERIA FOR EVALUATION OF SOFTWARE

Qualities to look for when selecting software for instruction.

William Walker, PhD.
Director of Research and Development, ICM School of Business, Pittsburgh

DAY 1 SESSION 3

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | 1 | 4 | 2 | 4 | | | | 1 | 2 | 4 | 4 |
| Nursing | | 1 | 1 | 3 | 8 | 6 | 5 | | | | 1 | 5 | 9 | 9 |
| Engineering | | | | 2 | 4 | 2 | 1 | | | | | 3 | 1 | 3 |
| Secy.Science/ Business | | | 1 | | | 1 | 2 | | | | | 4 | 1 | 3 |
| Computer Science Data Processing | | | | | 3 | | 1 | | | 1 | | 2 | 2 | |
| Misc(Admin) | | | | | 3 | 1 | | | | | 3 | 2 | | |

OVERALL RATINGS 5.3 5.4

COMPUTER LANGUAGES

A description of the capabilities and differences between some of the languages, such as LISP, "C", LOGO,ADA

David Artman, B.S., General Manager, CUINTIC, Software Development Company. Carnegie-Mellon University

DAY 1 SESSION A

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| Engineering * | | | | | 5 | | 1 | | | | 1 | 4 | | 1 |
| Secy.Science/ Business ** | | | 1 | | 3 | 2 | | | | 1 | 1 | 3 | 2 | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATINGS * 5.3 5.2

** 4.4 4.9

DEVELOPING INTERACTIVE INSTRUCTION IN HEALTH AND NURSING

Gloria Lombardi, R.N.,M.S.
Associate Professor
Nursing

DAY 1 SESSION B

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health* | | | 2 | 2 | 3 | 1 | 3 | 1 | | 2 | | 3 | 3 | 2 |
| Nursing ** | | | 1 | 3 | 4 | 4 | 12 | | | | 1 | 9 | 7 | 8 |
| Engineering | | | | | | | | | | | | | | |
| Secy.Science/ Business | | | | | | | | | | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATING * 4.81 4.9

** 5.72 5.9

USING THE WORD PROCESSOR TO TEACH GENERAL WRITING SKILLS

Application to general letter-writing skills

Glynda Hull, Ph.D.
Post Doctoral Research Fellow-Learning Research and Development Center
University of Pittsburgh

DAY 1 SESSION C

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | |
| Secy.Science/ Business | 1 | | 1 | 1 | | 1 | 1 | | | | | | 2 | 3 |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATING 4.2 6.6

MANAGEMENT, BUSINESS AND ADMINISTRATORS, ENGINEERS - PROJECT SCHEDULER

A computerized management system for organizing interrelated tasks and answering "what if " questions.

Brady Bisson, P.E.
Civil Engineer- Computer Research, Inc.

DAY 1 SESSION D

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| Engineering * | | | | | | | 1 | | | | | 1 | | |
| Secy.Science/ Business ** | | | | | 1 | 1 | | | 2 | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | 1 | | | | | | | 1 | | | | |

OVERALL RATING 5.7 3

General Program Appraial Comments - DAY ONE

Allied Health

Question 2. What subjects or topics presented during this program would you like to see presented in more depth at another program?

Question 3. What other subjects or topics related to computers and teaching would you like to see in the future?

"Workshop on computer design."

"Applications of computers in nursing/Allied health."

"Case study programsand simulations."

"Format do's and dont's not a review of personal project."

"Dr. Walker at anytime."

"More Allied Health"

"Simulation Development."

"Medical billing Financial Management ."

Question 4. Additional Comments.

"How can student's obtain the knowledge to utalize the computer. Will computer courses need to be integrated into the curriculum."

" This was my first exposure to computer."

Nursing

Question 3.

" Designing Nursing courses in Health Related Courses using the computer as a teaching tool."

"Presenting sections of lectures on computer. Use of computer in teaching psycho-motor skills. "

"How to use interactive video disc."

"How to develop a program."

"More hands on.

"Complete Nursing Program- View software."

"Authoring program."

" A workshop conducted to actually participate in program development."

"What areas are available, how are they being used in actual situations. Results of retention of material studies."

"More on how to develop an instructional program and more on this would be supplied at this type of workshop."

"More on how computer can help with administrative functions."

"Software demos on Psychology problems."

"Languages available Guides as to what languages are best for what disciplines."

"End products of completed nursing clinical programs."

"More on video discs from specific companies for various disciplines."
"Hands on practice."

"Program well organized."

"I knew much of what was presented was fascinated with the CPR model."

"Interactive Nursing Instruction."

"Integrating computers into programs instruction as an alternate strategy."

"Word Processing General Writing. (3 comments) Has been offered for Faculty."

COMPUTER SCIENCES

"Help choose software that is relative and appropriate."

"Comparing Programming languages."( More) 2 comments

"More specific uses of authoring systems. Specifics on how to write tutorial programs."

"Demo of authoring packages."

"I would like to see in-service days established where teachers from a particular discipline get together with teachers from all campuses."

"Parking was terrible." 10 comments

"Very well planned program condensing a lot of effort and organization."

ALLIED HEALTH

"Workshop on computer design."

"Case study programs.(Simulations)"

"Format Do's and Don'ts-not a review of personal projects."

"Dr. Walker at anytime."
"To use the computer, students (CM MLT) would have to have had some type of computer experience before entering the program as we have 72 credits now we cannot add Data Processing to curriculum."

"How can students obtain knowledge to use the computer?"

ENGINEERING

"Good overall information."

"Like to be kept current with respect to technology."

"More software, hardware languages."

"More,
Engineering Physics Chemistry."

"More of the same."

ORGANIZING INSTRUCTIONAL CONTENT FOR
developing Computer Based Instruction

A description of a program
Problems involved in developing a program.

Kay Huber, M.S.N
Director of Nursing

Diana Wells, M.S.N.
Asst. Professor, Nursing
Harrisburg Area Community College

Anthony Filippelli, R.T.T.

"Very well presented,clear, sequential"
"Very well done-very inspirational I'd like to start developing my own C.A.I."

DAY 2 SESSION Allegheny Campus

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | 1 | 2 | | | | | 3 | 3 | 2 |
| Nursing | | | | 2 | 3 | 3 | 6 | | | | | 5 | 5 | 4 |
| Engineering | | | | | | | | | | | | | | |
| Secy.Science/ Business | | | | | | | | | | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

HARRISBURG –

OVERALL RATINGS 6.0 5.9

COMPUTER USES IN HEALTH CARE

Bernard Pennrock, Ph.D.
Assoc. Professor, School
Of Medicine, University
of Pittsburgh

DAY 2 SESSION Allegheny Campus

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | 1 | 2 | 1 | 2 | 2 | | | | 1 | 1 | 4 | 2 | |
| Nursing | | 1 | 5 | 2 | 4 | 1 | 1 | | 2 | 2 | 6 | 1 | 3 | |
| Engineering | | | | | | | | | | | | | | |
| Secy.Science/ Business | | | | | | | | | | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATINGS 4.18 5.0

LOTUS I-II-III SPREADSHEET APPLICATION

Roger Duffy, B.S., M.A.
Training Specialist
Management Information
System. Westinghouse
Nuclear Operations
Division

Comments

The presenters were very well versed I really feel it will be beneficial

"Good Step by step hand-out so people could progress at their own pace."
"More of the same."
" It will be useful. it could be presented more coherently, too specific not general enough."
" Not my primary field at this time. Thorough but difficult to follow not my teaching area.
"Well done." 2 comments
"The seminar is invaluable. It will help when developing appl. software course."

DAY 2 SESSION NORTH CAMPUS

| | Relevance | | | | | | | Quality | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rating Scale: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | |
| Secy.Science/ Business | | | 2 | 1 | 3 | 3 | 3 | | | | 1 | 1 | 4 | 6 |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATING 6.25

CAD Computer Aided design and drafing systems with true professional capabilities built around the high performance Texas Instruments Professional Computer.

Thomas Lubanovic, P.E . Assoc. Professor, Civil Engineering, CCAC-Boyce Campus

comments

"Great"

DAY 2 SESSION BOYCE CAMPUS

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| Engineering | | | | | 1 | 1 | 8 | | | | | | | 10 |
| Secy.Science/ Business | | | | | | | | | | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATING 6.7 7.0

ORIENTATION TO DATA BASE
R:base 4000

David Artman, B.S.
General Manager, CUINTIC
Software Development
Carnegie-Mellon

Comments

"Very Good"
"Discussion was not well organized"
"Speakers knowledable not well organized."
" This is more a generic overview need more relation to individual disciplines."
"Didn't fully understand presentation"
"Compliments for doing a good job on the entire workshop this was a good presentation."
"Can't see relationship to discipline. A technical lecture"
"Information informative presented very well."
"Not relevant, but interesting and stimulates thinking. Want to review Harrisburg CC program" 3 comments
"Need much more instruction and hands on. Need more workshops"
"Words words words, It would have been more useful to divide into disciplines."

DAY 3 SESSION NORTH CAMPUS

| Rating Scale: | Relevance 1 | 2 | 3 | 4 | 5 | 6 | 7 | Quality 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allied Health | | | | | | | | | | | | | | |
| Nursing | | | | | | | | | | | | | | |
| ~~Engineering~~ all disciplines with manual computer experience | | 6 | 4 | 1 | 6 | 8 | 9 | | 2 | 3 | 7 | 11 | 8 | 1 |
| Secy. Science/ Business | | | | | | | | | | | | | | |
| Computer Science Data Processing | | | | | | | | | | | | | | |
| Misc(Admin) | | | | | | | | | | | | | | |

OVERALL RATING 4.18 5.0

DATA PROCESSING, THOSE WITH COMPUTER EXPERIENCE-DATA PROCESSING LAB

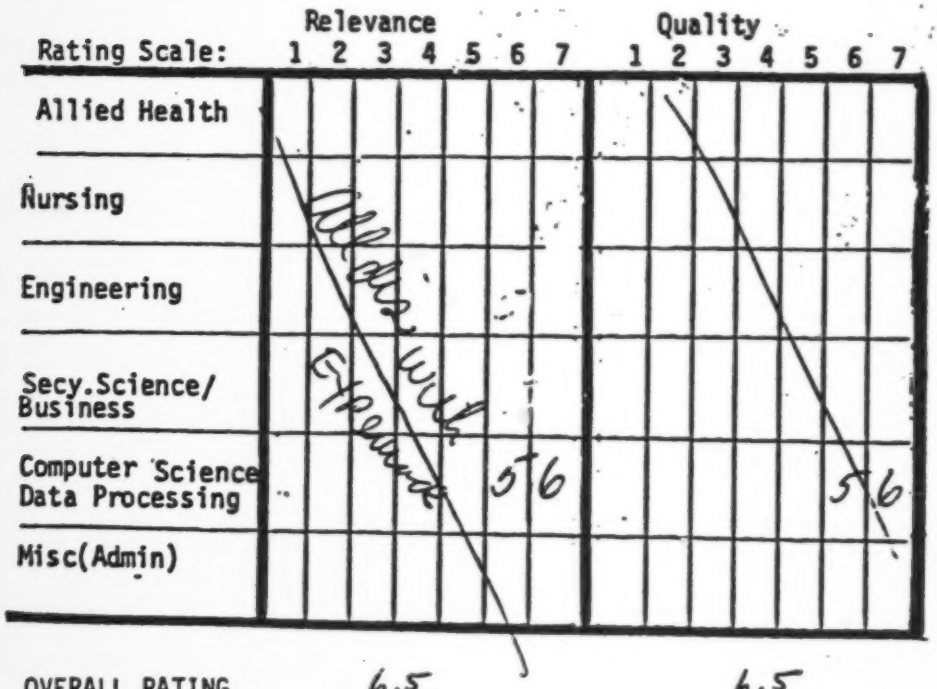
R:base 4000
Data base training with a powerful sytem easier to use than others with similar capabilities.

Edmund Weihrauch, M.B.A
Assoc. Professor, Computer Science, CCAC Boyce

Comments

"I strongly support more workshops, This one should have been a little longer."
"Excellent would have liked a longer session."
"Definitely more effective then D Base II
"Just what I wanted"
"Ed Weihrauch did an excellent job. His student aids also quite helpful."
" A useful knowledge for tracking students. Essential for our accreditation."
"Helpful for my purposes with some D base background."

DAY 3 SESSION Boyce Campus




OVERALL RATING 6.5 6.5

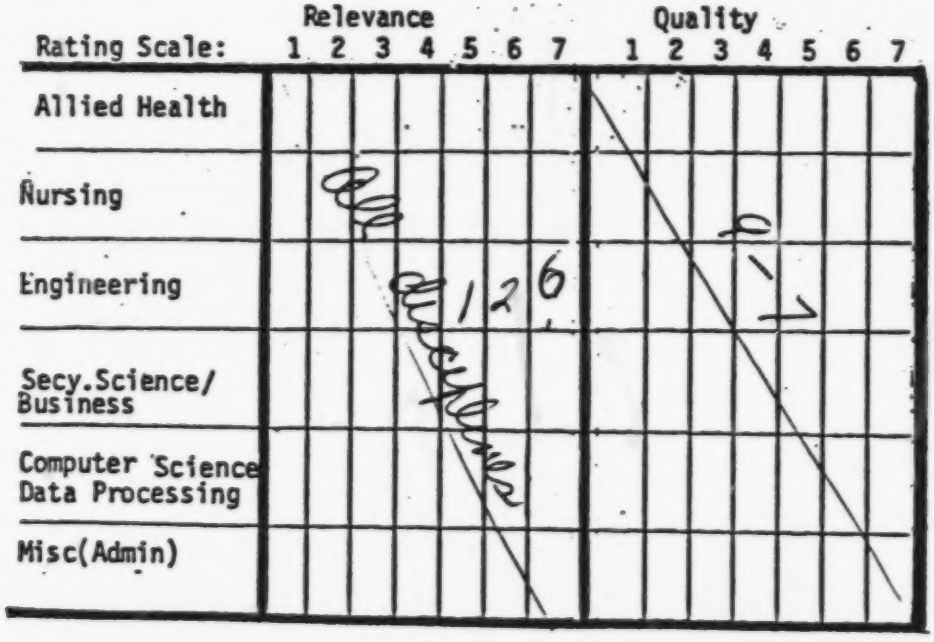
FULL DAY TRAINING SESSION IN-DEPTH
R:base 400 APPLICATION

David Artman &
Franklin Kern

In this session, participants learninged the commands to call up relational information, to create their won data base. Participants worked with the computer on a one to one basis. The instructors wrote their own 45 page set of instructions to simplify the process and took the participants step by step though each command sequence.

"Extremely informative"
"Both presenters were most hepful in learning data base"
"Excellent Preparation"
"Practical experience very helpful"

DAY 4 SESSION R:BASE SATURDAY June 9, 1984




OVERALL RATING 7.0

# THE COMPUTER AS A TEACHING TOOL

## Evaluation Report

Diane J. Davis, Ph.D.
Associate Director
University External Studies Program
University of Pittsburgh
Pittsburgh, PA 15260

This evaluator reviewed the plan and program for The Computer As A Teaching Tool and attended the first full day of this two and one-half day seminar and workshop. This report covers the overall organization and structure of the seminar, as well as the general sessions held on the morning of May 21 and the afternoon Session A on Computer Languages for Engineering and Data Processing professionals. It includes an assessment of:

(1) the conceptual organization and structure of the seminar
(2) the content of the seminar, with particular reference to the sessions specified above
(3) the presenters, also with particular reference to those observed in the sessions specified above

### Conceptual Organization and Structure

#### Audience

The Computer As A Teaching Tool (CATT) is a seminar that was designed for faculty and administrators at the Community College of Allegheny County. It was intended to address professional development needs for all campuses of the college and sessions designed and located at the North, Boyce and Allegheny campuses facilitated attendance and participation by personnel at all three of those sites. The South Campus, although invited and encouraged, elected not to participate in the seminar.

The attention to physical location and facilities in the design of this seminar, combined with release time provided for

attendance, were instrumental in enabling a significant number of faculty and administrators to take advantage of this educational opportunity.

## Conceptual Structure

The CATT Seminar began with general, introductory sessions on the use of computers for teaching and then branched into discipline-specific sessions that were specially designed for engineering, nursing and allied health, business/management and secretarial science and data processing. The general sessions were designed to provide basic instruction and, as such, presumed minimal entering skills. This design is appropriate for a smeinar of this sort since it allows ease of entry for novice participants. In this case, the general sessions also provided a demonstration of a computer-based instructional teaching unit and a case study of an interactive video program that were of interest to both the novice and the more experienced participant. This strategy helped to ensure that each participant was able to benefit from the general sessions, regardless of his or her experience to date.

The conceptual design of the general sessions effectively prepared participants for subsequent discipline-specific programs by providing an overview of computer-related concepts and constructs. The concepts covered included basic terminology, CAI modes, hardware and software, and types of applications; the constructs included CAI, CBI, Interactive video artificial intelligence. An additional session on Criteria for Evaluation of Software contributed to the participants' general introduction to the field by providing a comprehensive set of generic assessment categories for the evaluation of particular computerized packages and programs of instruction.

Discipline-specific sessions were the focus of most of the remaining two seminar days. Four options were provided for the afternoon of the first day at the Allegheny campus: Engineering and Data Processing, Nursing and Allied Health, Secretarial Science and Management and Business. This format enabled participants to learn about applications that were relevant to their own fields -- an instructional

strategy that is particularly effective for adult learners.

To summarize, the conceptual structure of the seminar was primarily deductive and topical, i.e. it provided general information followed by specific applications and examples geared to the relevant disciplines. This structure and the resultant organization were explicit in the printed program material and provided a strong conceptual base for the effectiveness of the seminar. The curriculum and instructional design background of the conference coordinator was much in evidence in the framework that she provided for this complex educational task.

**Content**

The content of the CATT Seminar was quite comprehensive. Within the general theme of instructional computing, it included basic CAI tools and procedures, software evaluation, languages, word-processing, spreadsheet and management programs, computer graphics and data bases. As mentioned earlier, the general sessions provided introductory information and examples/demonstrations of computer based instruction. This evaluator also attended the session on Computer Languages for the Engineering and Data Processing disciplines. The content in this case focused heavily on the language "C" and compared it to other instructional programming languages such as LISP and ADA. The presenter also provided comparisons with BASIC, FORTRAN and PASCAL in describing some of the strengths and limitations of "C". While obviously a "C" advocate, he readily and competently responded to participant questions about other languages. The extent and nature of those questions indicated that this content was extremely relevant to those who elected to attend this session.

The content of the seminar as a whole, while extremely ambitious, was comprehensive, relevant and interesting. It was selected to provide a solid background and introduction to computer-based instruction and was successful in meeting this goal. The conference coordinator carefully provided content requests for each of the presenters and, where possible, gave them advance information about the presentations that preceeded and followed theirs. Any participant, and especially

the novice, was able to acquire information and experience in CAI and its major forms of application. The particular content instances selected for the seminar, such as Project Scheduler, Lotus I-II-III and R:base 4000 were chosen on the basis of their appropriateness to the audience and their widespread acceptance in the field.

**Presenters**

The particular presenters actually observed by this evaluator were competent and well-prepared. Each was careful to present the information and ideas described in the program brochure and to request and respond to audience questions. Their relevant and direct experience in computer-based instruction was especially notable and their presentation styles, while varied, were effective in each case.

Overall, presenters were selected on the basis of their content expertise, their presenting skills and their experience. The conference coordinator was careful to search out both local and national experts and the conference program reflects her able blending of these resources. She drew from a wide variety of organizations -- colleges, universities, corporations, private schools and research centers -- in order to provide the most competent staff for this seminar. The multiple-presenter format was appropriate for a seminar that was designed to address such a wide scope of topics and disciplines.

**Summary**

The CATT Seminar was well-designed. It combined appropriate content with effective presenters to provide an excellent overview of the field of computer based instruction. Participants with varied backgrounds were able to learn about current applications in the field that could relate to their own disciplines. It effectively combined didactic instruction with hands-on experience and demonstration to introduce participants to this new technology. I believe that this design could be used as a prototype for other similar settings and goals. Its basic elements would require minimal adaptation for this purpose and most topics are generic enough to apply to a variety of audiences. This evaluator encourages further dissemination and use of the design that has emerged from this project.

EVALUATION OF "THE COMPUTER AS A TEACHING TOOL"

-a seminar held at Community College of Allegheny College
-May 21 to 23, 1984
-organized by Dr. Jo Anne Dunn CCAC

The expressed intent of the seminars and workshops on May 21 to 23, was a focus on using the computer as a teaching tool. Starting with an overview on Monday morning, each seminar expanded the theme and made the content more immediately applicable to specific audiences. As a instructional designer myself, I could see the progression of the planned sessions and appreciated the care and resourcefulness of Dr. Jo Anne Dunn's work in organizing the total package. Materials, speakers, sessions, location, and conveniences planned for those attending were of high quality.

I attended the sessions on Monday at CCAC and Wednesday at Allegheny North and so my comments will reflect the events of those days and locations.

Monday

The content of the day was highly relevant to teachers in higher education, regardless of the disciplines they represent. Beginning with an explanation of computers as a teaching tool, the sessions moved to general aspects of design, application and evaluation and then moved on to specific applications. The presenters were knowledgeable and well chosen. Berry's lecture was necessary to set the stage and he was very well prepared and informed. The audience was attentive and his presentation seemed well received. Lombardi was also well prepared, caught the attention of the audience by the use of the videodisc and computer, and kept the attention by her demonstrations. Bendors had high interest, but it was to one large segment of the audience, the nurses. If the intent of her presentation was to demonstrate applications, then a more general model might have been selected. Walker presented criteria for evaluating software in a

text book fashion, but this seemed effective, judging from the attentiveness of the audience.

The last part of the first day was divided among smaller groups. I attended the presentation of Glynda Hull from the Learning Research and Development Center at the University of Pittsburgh. She had invited the director of the project she is working on, Dr. David Barthelomew, to present with her. His presentation was actually the stronger of the two and he might be considered as a future resource.

In design and content the first day focused on the relevance and use of technology in education. As such, I believe it met the objectives of the grant and the planner. While I heard complaints about the location, that is to be expected when one brings persons from several campuses together and there is an element of unfamiliarity for some. The arrangements, availability of materials, equipment, and other needs were well handled. (Lunch was marvelous, an accomplishment not often achieved in such sessions!)

Wednesday

This presentation was at Allegheny North campus. Both presenters Artman and Kern were extremely knowledgeable of the content--R:base 4000. In using this more sophisticated and powerful data base, both acknowledged that they had the obvious problem of reducing several three-credit courses at CMU to a three-hour presentation. They are to be commended for the smoothness of the resultant presentation. The most obvious problem of the presenters was the paucity of examples they could use to which the audience could relate. It may have helped the audience to use a case study approach--working one set of data or one example through the configurations possible in R:base 4000.

The minor delay because of the unexpected blank diskettes was quickly handled and the time was recouped by those who just waited a few minutes. It was a real

situation, because this can happen in actual teaching situations.

Overall, the presentation and the system presented seemed to be very useable in their situations. This was reflected in the questions, attention, and actual practicing of the faculty..

Future workshops of this nature: concentrated, over several days, and sequential in development, will allow the faculty of the college to move a giant step in the use of a technology which is impacting more and more on education and on life.

Jean Silvernail

Dr. Jean Silvernail
Director, Professional Development
Robert Morris College

5-12-84

# OUR STATE-OF-THE-ART COURSES KEEP PACE WITH FAST-CHANGING TECHNOLOGY

## UNIX™ OS: THE FIRST STEP "WHAT IT IS; HOW TO USE IT"

10/22—10/25 Pine Mountain, GA
11/26—11/29 Pine Mountain, GA

This course is for middle to upper management in data processing. UNIX OS will be most helpful to Vice Presidents and Directors of MIS, Vice Presidents of IS Planning and Directors and Managers of Data Processing, among others.

### COURSE OBJECTIVES

- Examine the UNIX Operating System architecture and be able to define existing and potential UNIX applications.
- Establish the benefits of running the UNIX Operating System.
- Learn the key issues in implementing the UNIX System and be able to compare it with other operating systems.
- Experience the UNIX System from a user's viewpoint with a hands-on approach throughout the course.

3½ Days—$800

*NOTE:*
*For prompt service, always give the complete course title plus the priority code which appears in bold-face type in the shaded box on the enclosed registration card.*

Training Cost Examples
Less Travel Costs

## INFORMATION RESOURCES PLANNING "AN APPROACH TO OFFICE INFORMATION SERVICES"

9/10—9/13 Pine Mountain, GA
10/15—10/18 Dallas
11/12—11/15 Los Angeles
12/10—12/13 New York

This course is for middle to upper level managers of information and telecommunications services, including MIS Directors, IS Planning Directors and Vice Presidents of Planning, among others.

### COURSE OBJECTIVES

- Establish a planning process for information systems integration by applying fundamental organizational planning concepts.
- Extend the information systems planning process to include specific methodologies for identifying opportunities within the office that offer high potential for return on investment.
- Design and strategically manage an information systems integration plan with emphasis on positive performance.
- Communicate the benefits of information systems integration concepts and technologies through the use of presentation aids and techniques.

3½ Days—$800

## UPCOMING COURSES

It's our experience—and yours, no doubt—that the communications management field is constantly changing. And that's why we are continually revising, updating and creating new courses. Like these, scheduled for addition in 1984:

### OFFICE AUTOMATION FOR TELECOMMUNICATIONS MANAGERS

This management course will provide an understanding of office systems applications in a rapidly changing environment. Half of the course is laboratory time.

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This course will teach management by objectives, coaching for improved performance, motivation techniques, project team management and environmental issues of the technical workplace.

### INTRODUCTION TO TELECOMMUNICATIONS

This basic course will provide an understanding of the applications, systems, technologies and current issues associated with voice communications.

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## MEDIA AND SOFTWARE USED IN INSTRUCTIONAL SESSIONS

ABG and Pulmonary Function Testing , Cardio Respiratory Management Systems. Arlington Texas. (Softare 2 Discs)

ADMINISTAR, Mosbysystems. Nursing. Files, taracks, sort, reports, used for Administrators, instructors, advisors, nurses physicians, and secretaries

AUTOCAD-86 1.40+ADE, Autocad, Inc., MS dos operating system utilities, used to format, copy disks graphics on plotter and digitizer, sample drawings included.

BUILDING A MEDICAL VOCABULARY, Saunders Co.

CLOUT/IBM. MICRORIM. Conversational language option for R:base combines natural language with artifical intelligence and adapts to requests for information in conversational english.

COMPUTER SIMULATIONS IN CLINICAL NURSING, Corbett & Beveridge, Sanders, Disketts and Text.

CONDOR III 2.11 Texas Instruments. Data Base management system, 5 data type files neric, alpha-numeric, alphabetic, data and dollar-32 sort fields also provides sophisticated report generator.

CP/M-86 1.1, Texas Instruments. Runs 8086 Microprocessor-integrates and mixes programs communication through interprocess communication used with GSX-86 Graphing System

DRUG INTERACTION. Dambro & Griffith, W.B. Sanders. Inactivation, absorption, distributing biotransforamtion, excretion and reception active.

LATTICE 8086/8088 C COMPILER. Lifeboat Associates. High Level language MS-DOS 2.0 pathnames and large memory models, giving software developers the ability to create programs and date structures which utilize large memory

LOGO. Krell Software. Technical Manual on Utilities, information, applications, graphic printing, commands, directing and animating

LOTUS I-II-III. Lotus Development Co. Advanced graphic routines, spread sheet analysis programs, slides for presentation.

MEDICAL PRACTICE MANAGEMENT. Fisher Business Systems. File Maintance, Patient, Transaction processing, billing, inquiry, report and listing tables maintance, end of period processing, patient scheduling, system parameters, change date.

MOUSE PAINT. Apple Computer Inc. Creates, Loads, saves, modify and prints high resolution designs used with applie IIE Mouse.

MS DOS 1.2, Texas Instrument. Operating system to boot system, execute, text editor (Eldin) creation and editing of text files and maintance

NURSTAR. Mosbysystems. Basic review of nursing principles, nursing behaviors, cognitive level, decision making, and clinical knowledge

PFS: FILES. Page & Mays. Information management system paper filing system design, renewal, retrieve and review, includes labels.

PROJECT SCHEDULER. Scitor Corporation. Planning, tracking, reporting of project schedules. Tutorial included.

R:base 4000/TI. Micro Rim. Relational data base management system included tutotial guide and report writer. Can interface with multiplan, visicalc. Lotus 1-2-3-, Word processing packages, D-base II.

SKILLS SIMULATOR. D. Larson, Ph.D., Lippincott Software. Diskettes and cassettes, computes simulator and tutorial basic nursing psychomotor skills.

THE INSTRUCTOR/1.20. Individual Software. Fast techniques, organization, training experiences in the latest concepts in computer learning.

## VIDEO DISCS & INTERACTIVE SYSTEMS

American Heart Association CPR Learning System, Actronic In. An interactive system including video and manipulative perhiperals used to training Cardio Pulminary Recussitation Techniques.

First National Kid Disc. Pioneer Video, Inc. Instructional Video Disc.

Miles Learning Center: Video Discs, Fusion Media. Appendectomy Techniques for appendectomy. Medical Applications, Hematology, Medical Instruction. Hematology Slide Material.

Miles Learning Center. Fusion Media. Orientation and Operating Instructions This disc introduces videodisc technology and the Miles Learning Center to residents, doctors, nurses, and interns.

Hawaii, Sony Corporation, Demonstration of interactive video and computer.

PROPOSAL FOR IMPLEMENTATION OF: In-Service Training for Advanced Technology for Vocational Education Training Grant

PURPOSE AND SCOPE OF THE PROGRAM:

The purpose of the program is to develop skills in computer applications, evaluation of software, and Computer Based Training for from at least 40 but not more than 100 Vocational Education Faculty and administrators on all campuses of the Allegheny Community College. The Vocational Education disciplines will primarily include the Health Related Professions, Business/ Data Processing, and Engineering.

NEED:

There is a need for faculty development and training not only in the technical aspects of computer programming, but in the development and use instructional programs that incorporate (CBT) Computer Based Training and/or computer applications as an integral part of the curriculum. This training is necessary for faculty and administrators so that courses may be kept current with the increasing demands for marketable skills in technology.

PROBLEM:

Vocational Education Faculty have had few opportunities for in depth orientation and interaction with hardware and software directly related to their teaching discipline.

RATIONALE:

The program will be designed to assist Vocational Education Faculty in becoming departmental "ex perts" and agents of change. So that they will be able to act as a resource for other faculty in their field and assist in implementing the Campus Master Plan for use of the Computer in instruction.

The program will emphasize intensive short term training because of a number of constraints, including hardware, software, space, and faculty time and committment. Futhermore, the rational for a short term intensive strategy is that the learner is able to concentrate fully on the instruction without the interruption of time. That is to say 12 to 14 hours of training concentrated in a two day session is equivalent to a full one credit course load. Over a two day session, the continuity of the instruction can be maintained more easily and the learner can actually see personel progress.

GOAL:

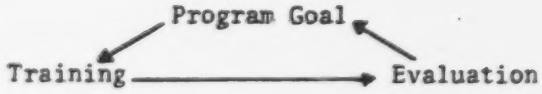
To provide an orientation, a rationale, and concentrated training in specific disciplines so that faculty and administrators will gain the background necessary for initiating recommendations for incorporating computer based training programs in the Vocational Educational Curriculum.

METHOD FOR DEVELOPMENT OF THE PROGRAM:

As a first step in the development process and in keeping with the master plan for computer use in instruction at Allegheny Community College, a series of program objectives for management and design of the sessions are outlined below.

In organizing the program the program director and Program Committee will:

- Identify topics and areas that are generalizable and/or overlap with each of the specified disciplines
- Assess the program needs and those of faculty.
- Outline skills required for use of software in each discipline.
- Identify skills necessary for developing computer based instruction.
- Select software appropriate to each discipline.
- Recruit qualified instructors with experience in training the necessary software application and design skills.
- Locate available hardware among the campuses for use by participants.
- Identify times convenient for faculty attendance with the time frame of the grant.
- Provide specialized training for each separate discipline keeping as close to the original proposal as possible.
- Offer closure and future directions (Campus Master Plan) for the use of Computer Based Instruction throughout the CCAC system.
- Develop valid and reliable evaluation instruments to assess behavior based on achievement of specified criteria.
- Develop a plan for follow-up support among the campuses for those wishing to revise existing courses to include CBT or to develop new courses.




NEEDS ASSEMENT:

The Instructional Needs will be assessed by:

- Meeting with department chairpersons and interested faculty to determine the scope of the present curriculum and the future directions each discipline wishes to pursue.
- Asking each (Vocation Education) department director to outline the types of computer programs they wish to include in the existing curriculum and the skills necessary for faculty to implement change.
- Interviewing those outside the college who are experts in the field or are employed in specific Vocation Education fields.

CONSTRAINTS AND LIMITATIONS:

The grant limits the participant learners to faculty and administrators directly related to disciplines in Vocational Education.

The constraints include software, hardware, space, and time.

SOFTWARE:

The budget provides for some software money, but if programs like Data-base 11 and LOTUS 1-11-111 are used for training sessions, more software will be needed. We are unable to rent software as indicated in the original budget. The needs of software in the health fields are as yet undetermined.

POSSIBLE SOLUTION:

- Budget revision, possibly borrowing software from other campuses, if it is available.

HARDWARE

Mostly all the hardware on Allegheny Campus is heavily used by students (even on Saturday ). We have not specifically defined our hardware needs at this time, but we should provide at least one computer per 2 learners. We have tentatively scheduled the TI's here on campus. But, they are only available after 11:00 a.m. on the first week of the 10 week session on Tuesday and Thursday and during Easter break.

POSSIBLE SOLUTIONS:

Since hardware cannot be rented , especially a large number of specific types of machines, we may stagger some sessions and possibly repeat others. But, we still have the problem of full day sessions for application training programs such as LOTUS I-II-III and CAD CAM etc.

If machines are available on other campuses, on the second day of the program, we may send faculty and administrators to another campus. For example, all engineers may go to Boyce Campus on day 2 if equipment is available, and Nurses may be trained on North Campus, Data Processing at Allegheny. If possible, this arrangement makes the program more of an intercampus undertaking. Moving more than a few machines from one campus to another seems impractical since most of them are bolted to tables and must be taken apart to move. (This is only a suggestion at this time.)

SPACE. The constraints of space are similar to those of hardware, but this is more easily resolved. If we find enough hardware that is able to be moved we can find space.

TIME: Time may be the greatest constraint. Not only is there a problem with time when hardware is available, but there is a problem with faculty time. From talking with faculty and administrators, Easter break when most hardware is available, is unacceptable to faculty, Many of them will be out of the city, Few would attend.

Another time that was explored was the end of finals week. But then, hardware is heavily used.

The other possibility, within the time frame of the proposal and not too far into the summer is the first week of the 10 week session. We have at least two afternoons when we can use the equipment in the Word Processing room.

POSSIBLE SOLUTIONS:

In order to be accountable for at least the minumum number of participants indicated in the original proposal there is a need to provide an incentive for faculty. Because it is so late in the term and we are asking faculty to come on their free time or to leave class, either a stipend and/or release time and expenses may encourage participation and secure commit ment. Numbers of attendees may be increased by including part-time faculty in the designated disciplines, since many of these faculty have been with the college on a full time basis for a number of years. Some of these faculty are interested in change and although they have no direct input into curriculum change, they may provide resource expertise within their program.

Time as it is related to the availability of hardware is outlines in hardware solutions eg. possible movement to other campuses and staggered sessions.

TENTATIVE OUTLINE FOR PRESENTATION AND EVALUATION:

The program will be presented on two levels. First, it will include generalized topics relevant to the designated disciplines. This is to provide a background and foundation for the more intensive and specialized workshops that will follow. This first level will also serve as an orientation for instructional methods and techniques for using the computer as a learning tool and as an integral part of the curriculum. Participants will also be given an outline of future directions in the field because of the rapidly changing technology.

The second level will be more concentrated and specific to each discipline. Faculty from each department will be tracked into sessions in their own disicipline where they will review and evaluate software being used in their field of expertise. On this second level, faculty will either develop strategies for integrating these programs in their courses of study or they will be instructed in intensive workshops where they will be involved in increasing their skills in software application.

Faculty will be evaluated on both the affective and behavioral aspects of the program.

The affective evaluation will be designed in the form of a non-directed or semi-structured questionnaire in survey form.

The behavioral aspects of the program will be evaluated by measuring achievement using criterion referenced tests designed to measure the objectives outlined for each of the workshops.

SAMPLE OUTLINE OF POSSIBLE PROGRAM SCHEDULE:

The following is a sample of a tenative outline for general sessions on Day 1 of the program.

On Day 1 the topics may include:

I. Computer as a teaching tool.

II. Categories of computer applications for Vocational Education.

. Applications Software such as:

Cad Cam
Spread Sheets
Data Bases
Work Processing for improving
Letterwriting skills. Will be demonstrated.

. Computer Simulations will be defined as will their uses in health, business, and engineering.

. Computer Based Instruction will be discussed as will different levels of interactivity.

OTHER AREAS COVERED ARE:

. Issues related to effective teaching strategies and sequencing of training materials will also be addressed.

. Demonstration of an autoring system and an interactive program in the design of CBT by faculty using the "Author".

. A definition of interactive video, how it may be used in training and methodolgies for inexpensive ways to develop a program using video tape and the authoring system.

III. Methods for evaluating software.
IV. Workshops on MS-DOS and introduction to software packages in specific disciplines.

Day 2.

The second day of the program will include in-depth workshops for each separate discipline either in computer applications, development of CBT and/or evaluation of existing software and recommendations for course improvement using the computer as a learning tool.

On this day, if hardware is available, a number of concurrent workshops will be in progress. (See Constraints).

Learner objectives for tentative sessions and workshops are as follows:

— After completing the program the learner should be able to:

. Identify uses of the computer as a teaching tool.

. Define how the computer has applicability to their specific discipline.

. Explain what is meant by computer based instruction.

. Name levels of interactivity.

. List categories of computer applications.

. Outline at least three steps in planning instruction.

. Explain what is meant by an authoring system and name some of the advantages and disavantages of using an authoring system.

. Discuss what is meant by interactive video and outline at least two advantages of using it over simply using video tapes or written Computer Assisted Instruction.

. Identify at least 5 criteria for intelligently selecting software.

. Explain what is meant by MS DOS and demonstrate its operation.

— After workshop sessions, demonstrate specified operations using CAD CAM, Spread Sheets, Lotus I-II-III.

. Explain the relationship of a particular computer program to the overall curriculum and the relevance it has for the student in the job market.

. If given the proper conditions explain how to apply these programs to teaching and indicate their relationship to the overall curriculum structure.

PROFESSIONAL DEVELOPMENT FORM

School Community College of Allegheny Co. Participant 78 Faculty and Administ. Position Depts. Business- Data Processing Engineering Health Related Fields

* See Appendix B for in depth evaluations

| Dates | Hours | Presenter | Description of Training | Impact of Training |
|---|---|---|---|---|
| 05/21/84 | 10-11 | **Louis Berry, Ph.D.**<br>Assoc. Professor, Educational Communications and Technology<br>University of Pittsburgh | **COMPUTERS AS A TEACHING TOOL**<br>● Computer assisted instruction,<br>● Application packages<br>● Authoring systems - an overview | The morning sessions on this day provided an overview of concepts of computer assisted instruction and applications packages and interactive video programs. It included demonstrations and discussions on how the different programs and applications may be used or are being used in classroom instruction. |
| | 11-12 | **Gloria Lombardi, R.N., M.S.,**<br>Assoc. Professor, Nursing<br>County College of Morris<br>Randolph, N.J.<br>co-project director of Grant for Interactive Video Disc Course Design | **COURSE DESIGN FOR USING THE COMPUTER AS A TEACHING TOOL: A CASE STUDY THAT WILL:**<br>● Explain development of concept into interactive format<br>● Define interactive video<br>● Describe development of interactive teaching program<br>● A demonstration of a totally self-contained instructional unit. | |
| | 1-2 | **William Walker, Ph.D.**<br>Director of Research and Development, ICM School of Business | **CRITERIA FOR EVALUATION OF SOFTWARE**<br>● Qualities to look for when selecting software for instruction | |
| | | SESSION A | **ENGINEERING AND DATA PROCESSING**<br>Computer Languages<br>● A description of the capabilities and differences between some of the languages, such as LISP, "C", LOGO, ADA | This session introduced capabilities of different languages and their uses for various data processing projects and software design |
| | 2-3<br>3-4p.m. | **David Artman, B.S.**<br>General Manager, QUINTIC, Software Development Company<br>Carnegie-Mellon University | **HANDS ON AND DEMONSTRATIONS**<br>● Using a variety of software for education including Video Disk and Bio-Medical CPR System | |
| | | SESSION B | | |
| | 2-3 | **Gloria Lombardi, R.N., M.S.**<br>Associate Professor Nursing | ● **NURSING AND ALLIED HEALTH**<br>Developing interactive instruction in health and nursing | This session demonstrated the development aspects of an interactive nursing program. Applicable to the health field |
| | | SESSION C | | |
| | 2-3 | **Glynda Hull, Ph.D.**<br>Post Doctoral Research Fellow<br>Learning Research and Development Center<br>University of Pittsburgh | ● **SECRETARIAL SCIENCE**<br>**USING THE WORD PROCESSOR TO TEACH GENERAL WRITING SKILLS**<br>application to general letter-writing skills | The concepts presented in this section have led to a possible program in teaching letterwriting using the word processing application. |
| | | SESSION D | | |
| | 2-3 | **Brady Bisson, P.E.**<br>Civil Engineer<br>Computer Research, Inc. | **MANAGEMENT, BUSINESS AND ADMINISTRATORS, ENGINEERS (Optional)**<br>Project Scheduler<br>● A computerized management system for organizing interrelated tasks and answering "what if" questions. | An organizer for management. Uses for Business. |



NOTE: This form should be completed and included in the final report for all staff development activities.

PROFESSIONAL DEVELOPMENT FORM

School All Campuses Participant 15 10 48 Position Faculty and Administrators

| Dates | Hours | Presenter | Description of Training | Impact of Training |
|---|---|---|---|---|
| 05/22/84 | 9-10 | **Roger Duffy, B.S., M.A.**<br>Training Specialist<br>Management Information Systems<br>Westinghouse Nuclear<br>Operations Division | ● BUSINESS, DATA PROCESSING, SECRETARIAL SCIENCE<br>LOTUS I-II-III Spreadsheet Application | Faculty are planning to teach spreadsheet application in the near future. * See evaluation section and Appendix B. |
| | 10-11 | **Thomas Lubanovic, P.E.**<br>Assoc. Professor, Civil Engineering, CCAC - Boyce | CAD<br>Computer-aided design and drafting systems with true professional capabilities built around the high performance Texas Instruments Professional Computer. You will learn to:<br>● Create drawings<br>● Edit existing drawings<br>● Insert parts, features or entire drawings within drawings<br>● Develop standard symbols to use with all drawings | Experimental courses in Cad will be offered Fall 1984. The training provided in this session enabled faculty to use the applications package more effectively. |
| | 11-12 | **Kay Huber, M.S.N.**<br>Director of Nursing<br>**Diana Wells, M.S.N.**<br>Assistant Professor, Nursing<br>Harrisburg Area Community College | NURSING AND ALLIED HEALTH<br>Organizing Instructional Content for developing Computer Based Instruction.<br>● A description of a program.<br>● Problems involved in developing a program. | Faculty from Nursing and Allied Health found this session valuable and had numerous questions on beginning to integrate the computer into the curriculum. Continuing workshops will be offered to these faculty. |
| | 1-2 | **Bernard Pennrock, Ph.D.**<br>Assoc. Professor, School of Medicine, University of Pittsburgh | ● COMPUTER USES IN HEALTH CARE | Good introduction to uses of the computer into the Hospital setting. |



NOTE: This form should be completed and included in the final report for all staff development activities.

PROFESSIONAL DEVELOPMENT FORM (Contd)

School All Campuses Participant 69 Position Faculty and Administration

| Dates | Hours | Presenter | Description of Training | Impact of Training |
|---|---|---|---|---|
| 05/23/84 | | ORIENTATION TO DATA BASE<br>R:base 4000 | | |
| | | | **BOYCE CAMPUS** | |
| | | | *Data Processing, those with Computer Experience - Data Processing Lab* | This session covered a tutorial to R:base 4000. The attendees were advanced in data processing techniques. As a result of the session. Allegheny Campus faculty in business and data processing plan courses in data base. |
| | 9-10 | **Edmund Weihrauch, M.B.A.**<br>Assoc. Professor<br>Computer Science<br>CCAC, Boyce | | |
| | | | R:base 4000<br>● Data base training with a powerful system easier to use than others with similar capabilities. | |
| | | | **NORTH CAMPUS** | |
| | | | *Nursing, Allied Health, Business or those with Minimal Computer Experience.* | This session presented database concepts to the majority of participants. At this time those who attended requested more in-depth sessions. A full Saturday workshop was scheduled with the same instructors. * see next page |
| | 10-11 | **David Artman, B.S.**<br>General Manager, CUINTIC<br>Software Development<br>Carnegie-Mellon | | |

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NOTE: This form should be completed and included in the final report for all staff development activities.

PROFESSIONAL DEVELOPMENT FORM (Contd)

School All Campuses Participants 12 Position Faculty and Administrators

| Dates | Hours | Presenter | Description of Training | Impact of Training |
|---|---|---|---|---|
| 6/ 9/84 | 9-3:30 | David Artman,B.S.<br>General Manager,<br>QUINTIC<br><br>Franklin Kern,<br>Industrial Management,<br>Carnegie-Mellon Univ. | R:Base 4000<br>Indepth training in Data Base<br>application for all disciplines | The results of this training session have prompted the use of R.base 4000 and the basic data base concepts to be incorporated into several areas of the curriculum.<br>In instructional management, as a section of a data processing course in data base management and in the future it will be used in Nursing. |

ERIC Clearinghouse for Junior Colleges





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